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Document management — Assessing ECM/EDRM implementations — Trustworthiness

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 171, *Document management applications*, Subcommittee SC 1, *Quality, preservation and integrity of information*.

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Introduction

This document provides a methodology for organizations seeking to assess whether their ECM environment complies with key concepts of trustworthiness and information reliability as identified in ISO/TR 15801 and ISO/TR 22957.

Many organizations are now required to ensure their business-related electronically stored information (ESI) is securely created, stored and eventually destroyed in order to establish the authenticity and accuracy of the ESI and the security and trustworthiness of the organization.

This document identifies activities and operations an organization needs to follow in order to

— ensure that any electronically stored information (ESI) is created and maintained in a reliable and trustworthy manner through the entire ESI lifecycle, and

— evaluate existing enterprise content management (ECM) systems or electronic document and records management (EDRM) systems for compliance with applicable ISO standards.

ISO 15489, ISO/TR 15801 and ISO/TR 22957 provide organizations with guidance for the design of their enterprise content management (ECM) systems; however, organizations may also be required to provide auditable proof that these systems provide a secure environment for ESI that meets any legal, technical and policy obligations of the organization and comply with applicable ISO standards.

Any trustworthy ECM/EDRM solution needs to be capable of being audited, with reproducible results. There also needs to be a method of independently verifying the claims of the software and hardware vendors that the information is safe and secure and being stored in a trustworthy fashion. Organizations will need to ensure that their supporting documentation reflects these requirements.

Although standardized ECM solutions are likely to be auditable and can be easily verified, non-standardized or proprietary storage solutions may not provide a full audit trail and claims for the security of the ECM/EDRM solution made by vendors are difficult to independently verify. Regardless of whether the storage technology is standardized or proprietary, the organization faces the same need to be able to verify that the ECM/EDRM solution complies with all applicable requirements.

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Document management — Assessing ECM/EDRM implementations — Trustworthiness

1 Scope

This document identifies activities and operations that an organization needs to perform, or have performed, to evaluate whether the electronically stored information (ESI) is or was maintained in a reliable and trustworthy environment(s). These environments utilize content or records management technologies commonly referred to as either enterprise content management (ECM) or electronic document and records management (EDRM) enforcing organizational records management policies and schedules.

ISO/TR 15801 and ISO 15489 (all parts) established the standards and best practices associated with implementing trustworthy records/document management environments. However, a standard is necessary to define the methodology used to evaluate these types of records/document management environments regardless of what technologies are currently employed by the organization. This document establishes the assessment methodology to be followed to identify the level of organizational compliance with these standards as related to trustworthiness and reliability of information stored in these environments.

This document is applicable to existing or planned ECM systems. Establishing the existence of a trustworthy system is an important step in documenting the reliability of ESI maintained within that system or environment. This document is designed for use by organizations evaluating the trustworthiness of existing record/document management environments. This document identifies all of the mandatory activities and areas that need to be examined by a resource, or resources, with a thorough technical and operational knowledge of the specific technologies and methodologies being examined, along with understanding record management processes and activities.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 12651-1, *Electronic document management — Vocabulary — Part 1: Electronic document imaging*

ISO 15489-1, *Information and documentation — Records management — Part 1: Concepts and principles*

3 Terms and definitions

For the purposes of this document, the following terms and definitions given in ISO 12651-1, ISO 15489-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
authentic record
record that can be proven

a) to be what it purports to be,

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b) to have been created or sent by the person purported to have created or sent it, and

c) to have been created or sent at the time purported

3.2
business practice documentation
BPD
detailed business process document identifying how information is received, stored and managed along with the processes, policies and procedures followed by the organization

Note 1 to entry: The BPD contains sufficient information allowing the organization to authenticate or certify that electronically stored information contained within the electronic document/record management system is accurate, reliable and trustworthy.

Note 2 to entry: In some areas, this document is referred to as a master procedure manual.

3.3
electronically stored information
ESI
information created, used and stored in digital form, and requiring a computer or other device for access

Note 1 to entry: For the purposes of this document, ESI includes documents and records created and/or managed by the organization in the course of business. Electronic data contained within relational databases or specialized application data sets are not considered to be part of the ESI examined when executing this assessment.

3.4
readability
ability of the system to accurately reproduce the stored information in a consistent fashion over a period of time without modification to the original content in any way that materially changes what was originally stored

3.5
reliable
trusted as a full and accurate representation of the transactions, activities or attested facts and can be depended upon in the course of subsequent transactions or activities

3.6
trustworthy
stored electronically in an accurate, reliable and usable/readable manner, ensuring integrity over time

Note 1 to entry: See ISO/TR 15801.

4 Trustworthy ECM system assessment

4.1 General

4.1.1 Assessment output

Trustworthy ECM systems shall ensure that information being managed can be reproduced in a reliable fashion and prevent unauthorized modifications or changes to the content or associated metadata. This includes any ESI generated from various office applications that utilize external sources to "complete" the document/record then created and/or printed/saved as determined appropriate by the organization.

The output of this standardized assessment shall include a detailed report including sufficient information allowing the organization to determine how to best address any areas identified as not being in full compliance. The report should also include, with detailed technology (if appropriate), recommendations and records/document management related policies and procedures required to come into full compliance.

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